

September 7, 2004

Georgianna Contiguglia  
State Historic Preservation Officer  
Colorado Historical Society  
1300 Broadway  
Denver, CO 80203-2137

Dear Ms. Contiguglia:

SUBJECT: Draft Environmental Assessment (EA) for the Changing World Technologies' Thermal Conversion Process Commercial Demonstration Plant in Weld County, CO (DOE/EA 1506) (CHS#43797)

Enclosed is the environmental report under Section 106 of the National Historic Preservation Act for the Changing World Technologies' Thermal Conversion Process Commercial Demonstration Plant in Weld County, CO.

If you have any questions concerning the report, please contact me at 303-275-4723 or Joyce Beck, NEPA Documents Manager, at 303-275-4774.

Sincerely,

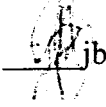
**Original Signed by**

Steven P. Blazek  
NEPA Compliance Officer

Enclosure

cc: Brian P. Kennedy (without enclosure)  
Project Manager  
SAIC

Paul Haberstadt (with enclosure)  
Director Environmental Engineering  
ConAgra Refrigerated Prepared Foods

Concurrence: jb

File # 8.2 13

OAHP Use Only: OAHP Doc. No. \_\_\_\_\_ OAHP Project No. \_\_\_\_\_

Colorado Office of Archaeology and Historic Preservation

**LIMITED-RESULTS CULTURAL RESOURCE SURVEY FORM**  
(Page 1 of 7)

Small scale limited results projects include block surveys under 160 acres with linear surveys under four miles. Additionally, there should be no sites and a maximum of four Isolated Finds. This form must be typed.

**I. IDENTIFICATION**

1. Report Title (include County): Changing World Technologies' Thermal Conversion Process Commercial Demonstration Plant, Weld County, Colorado.
2. Date of Field Work: 5/13/04
3. Form completed by: Laura Ziemke Date: August 27, 2004
4. Survey Organization/Agency: Science Applications International Corporation  
Principal Investigator: Claudia Druss and Laura Ziemke  
Principal Investigator's Signature: *Laura Ziemke* for Claudia Druss  
Other Crew: Survey performed by Laura Ziemke  
Address: 8100 Shaffer Parkway, Suite 100
5. Lead Agency / Land Owner: Department of Energy (owner - ConAgra Foods)  
Contact: Steve Blazek (DOE 303-275-4723)  
(Owner Contact - Paul Halberstadt, ConAgra Foods 630-476-0392)  
Address: 16127 Cole Blvd, Building 17, Golden, CO 80401
6. Client: Department of Energy
7. Permit Type and Number: Private Property
8. Report / Contract Number: DE-AM04-97-AL77611
9. Comments: \_\_\_\_\_

**II. DESCRIPTION OF UNDERTAKING / PROJECT**

10. Type of Undertaking: ConAgra Food, Inc. proposes to build a thermal conversion process (TCP) plant. The project will include several buildings within an 8-acre footprint. The total disturbance is approximately 52 acres (8 acres for TCP facilities, 4 acres for a lagoon, and 40 acres

for spray irrigation. The facility will receive mixed agricultural residuals and low-value organic streams transported to the CWT-TCP plant via truck from nearby agricultural processing facilities. It is expected that 20 trucks per day, each transporting about 20 tons (20.3 metric tons) per load, would transport materials to the site for consumption in the CWT-TCP process. These materials would be offloaded from the trucks into hoppers to begin the CWT-TCP process. Water used for operation of the CWT-TCP plant would come from recycled process water generated through the CWT-TCP process itself, except for the initial start-up of the plant, which would utilize water from an existing on-site well to begin the pulping and slurring process. Clean water recycling would be employed to minimize actual water use. After use in the CWT-TCP process, the excess produced water would be cooled from a maximum of 100 degrees Fahrenheit (F) (37.8 degrees Celsius [C]) (the requirement for the cooling of this process water is still under review by the Colorado Department of Health and Environment [CDPHE]) and meet groundwater standards defined by the CDPHE for discharge before release into the 4-acre (1.6-hectare) storage lagoon, with final water destined for spray irrigation. Process water would also be used for on-site toilets, and a sanitary waste leach field would be located on site to treat this wastewater.

It is anticipated by the project applicants that the proposed CWT-TCP plant would produce 800-1,000 barrels of oil, 10 to 20 tons (10.2 to 20.3 metric tons) of carbon (coke), 10 to 20 tons (10.2 to 20.3 metric tons) of dry mineral fertilizer, 5,000 to 10,000 gallons (18,927 to 37,854 liters) of liquid fertilizer (ammonium sulfate/glycerol solution), and 58,000 gallons (219,554 liters) of water on a daily basis, based on an input of 400 tons per day (tpd) (406.4 metric tons per day [mtpd]) of agricultural residuals and low-value organic streams. Remaining coke-like solids would be accumulated in a storage bin for pickup, as necessary, for off-site use either for blending as fuel, or for use as fertilizer. The CWT-TCP plant would include about five days of storage for oil, and about 10 days of storage for each type of fertilizer produced; however, these products would be picked up on a regular basis (i.e., several times per week). It is anticipated that 10 liquid tanker trucks would travel to and from the site on a daily basis to remove oil products. These trucks would deliver the oil products to local refineries. In addition, it is anticipated that one to two trucks per day would travel to and from the site daily to pick up dry fertilizer products, and one to two trucks per day would travel to and from the site to pick up liquid fertilizer products. These

trucks would likely travel to and from the site via I-76, exiting at State Highway 52, then traveling to the project site along CR 41. Once fully operational, the CWT-TCP plant would operate year-round for 24 hours per day, seven days per week. The goal is to operate the CWT-TCP facility for two years before a plant shutdown for routine maintenance and cleaning. The plant staff would include 20 to 25 full-time employees.

- 1 Size of Undertaking (acres): 52 acres Size of Project (if different) 52 acres
- 12 Nature of the Anticipated Disturbance: Surface disturbance activities would include the construction of several buildings within an 8-acre footprint, a 4-acre lagoon, and use of an open area for irrigation spraying. Other disturbances may include a pipeline to run water to the irrigation field.
- 3 Comments \_\_\_\_\_

### III. PROJECT LOCATION

Please attach a photocopy of USGS Quad. clearly showing the project location. The Quad. should be clearly labeled with the Prime Meridian, Township, Range, Section(s), Quad. map name, size, and date. Please do not reduce or enlarge the photocopy.

4. Description: The project area is located within Weld County, Colorado at an elevation of 4,900 feet above mean sea level and can be found on the Milton Reservoir, Colorado USGS 7 1/2 minute quadrangle. There are no developed roads leading to the proposed project area. Current access is by two-track dirt road. An access road is proposed at the junction of County Road 41 and County Road 26.

15. Legal Location: Quad. Map: Milton Reservoir, CO Date(s): 1950 Principal Meridian: 6th NM Ute

NOTE: Only generalized subdivision ("quarter quarters") within each section is needed

Township: 3N Range: 65W Sec.: 32 1/4s S1/2 SE 1/4 NW 1/4; SE 1/4 SW 1/4 NW 1/4; NE1/4 SW1/4; SE 1/4 SW 1/4; E 1/2 NW 1/4 SW 1/4; E 1/2 SW 1/4 SW 1/4

If section(s) is irregular, explain alignment method: N/A

- 16 Total number of acres surveyed: SAIC surveyed approximately 155 acres. This included the 52 acres of potential disturbance and the surrounding property, and 14 acres of proposed access road.
- 7 Comments: \_\_\_\_\_

### IV. ENVIRONMENT

18. General Topographic Setting: Topography of the project site is level, with elevations ranging only slightly from about 4,900 to 4,906 feet (1,494 to 1,495 meters) above sea level. The project site is not located in a geologic hazard area with regard to underlying or adjacent mine workings or faulting, according to the Weld County Planning and Zoning Geo-Hazard Map. Colorado is divided into three distinct physiographic provinces: The Colorado Plateau, the Rocky Mountains, and the Great Plains. The Weld County CWT-TCP project site is located within the Great Plains province, a broad expanse of flat or rolling prairies that extend from Alberta, Canada, to Texas. They rise gently from about 4,000 feet (1,200 meters) above sea level along the Kansas state line to about 7,000 feet (2,100 meters) above sea level at the eastern foot of the Rocky Mountains.

**Current Land Use:** The project site is located in the southwest area of unincorporated Weld County. The legal description of the project site is SW ¼ Section 32 Township 3N, R65W and Parcel Number 121332000004. The project site is owned by ConAgra Foods, Inc. and comprises approximately 320 leased acres (130 hectares) of mostly vacant land situated in a rural area comprising primarily agricultural and industrial uses. Nine leases for oil and gas development held by Patina Oil and Gas are located throughout the property, and it is also leased for grazing. One residence and several out buildings are located throughout the property (none of the buildings are historic). The project site is characterized by shrub and grass type vegetation, with some disturbed areas associated with oil and gas wells and dirt access roads. According to the Weld County Comprehensive Plan (2003), the project site is located within the County's A (Agriculture) Zone District. The primary goal of this zoning designation is to conserve the County's agricultural land for uses that promote the economic health and perpetuation of agriculture.

19. Flora: The project site is characterized by shrub and grass type vegetation. Located at the base of the foothills of the Rocky Mountains, the project site occurs at elevations ranging from 4,900 to 4,906 feet (1,494 to 1,495 meters) above mean sea level. This coincides with the Great Plains-Palouse Dry Steppe Province. Within the project, site the plant community most closely resembles a disturbed short-grass prairie. Typical grass species occurring in shortgrass prairie communities include buffalo grass, grama, wheatgrass, and needlegrass. Other plant species may include sagebrush, rabbitbrush, sunflower, locoweed, blazingstar, white prickly poppy, and Russian thistle. Groundcover in this community tends to be scarce, exposing the soil. Grazing has occurred on the

site in the past and natural gas wells are present. The northern portion of the project site comprises mostly native vegetation, while the southern portion is dominated by introduced species. The northern portion of the project site is comprised predominantly of sand sagebrush (*Artemisia filifolia*), sand verbenia (*Abronia fragrans*), and needle-and-thread (*Stipa comata*). In the southern portion of the project site, common rye (*Secale cereale*), downy brome (*Bromus tectorum*), and tumble mustard (*Sisymbrium altissimum*) make up the majority of the vegetative community. No trees were present on the project site.

20. Soils/Geology: There are no streams or intermittent drainages within the project area. The physical features of the Great Plains are not uniform throughout the state. The plains are generally divided into three sections: the High Plains, the Colorado Piedmont, and the Raton section. The project site falls within the Colorado Piedmont section, which consists of late mature-to-old elevated alluvial plains. Bedrock in the area, in order of increasing depth bgs, consists of the Laramie Formation, Fox-Hills Sandstone, and Pierre Shale. The Laramie Formation, specifically, consists of interbedded sandstone, mudstone, and shale, with localized beds of lignite and coal. A weathered to competent mudstone bedrock in the Laramie Formation underlies the lean clays at depths ranging from 12 to 29 feet (3.7 to 8.8 meters) bgs in the southeast corner of the property in the vicinity of the proposed site.
21. Ground Visibility: Ground visibility varied between 40 and 100 percent. In areas of low visibility, the grass was pulled aside for complete visual inspection of the surface. In addition, areas around rodent holes and two-track roads were examined for cultural material.
22. Comments: \_\_\_\_\_

## V. LITERATURE REVIEW

23. Location of File Search Compass and OAHP Files Date: May 2004

24. Previous Survey Activity

In the project area: No pervious surveys were identified within or directly adjacent to the project area.

In the general region: One survey in the general vicinity was identified during the records search:

1) Document ID WL.NC.R1: University of Northern Colorado Survey, Spring 1979: Preliminary



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Report of the Camp Survey, Weld County, Colorado. Principal Investigator, James M. Brechtel, January 01, 1979.

25 Known Cultural Resources

In the project area: There are no known cultural resources within the project area.

In the general region (summarize): A 1979 University of Northern Colorado survey identified three prehistoric sites (5WL400, 5WL449 and 5WL450) and several isolated finds in sections 30 and 31. These sites have not been evaluated for National Register eligibility. They are listed in the database as "Needs Data".

26. Expected Results: Based on results of the 1979 survey in adjacent sections, it was anticipated that archaeological sites or isolated finds could be identified. In addition, knowing the history of the area, it was anticipated that historic properties could be found on the property. However, no archaeological or historic resources were identified during the survey. The project area is highly disturbed which likely contributes to the lack of cultural material. A portion of the project area was bulldozed in an effort to contain a fire in the adjacent tire storage facility.

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**VI. STATEMENT OF OBJECTIVES**

27. The primary objective for this survey was to comply with regulations set forth by the State and Federal laws including Section 106 of the National Historic Preservation Act as amended. Compliance included surveying the area of potential effect. If cultural resources had been located during the survey, SAIC would have recorded and evaluated the resources using the appropriate Colorado Historical Society forms.

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**VII. FIELD METHODS**

28. Definitions: Site A prehistoric site is defined as any locality with structures or features (e.g., stone hearth) or having five or more artifacts in apparent association with one another and occurring within a restricted area. A historic site is any structural remnant (e.g., house or outbuilding), trash concentration or scatter suggesting use of the area or a refuse dump.
- IF Prehistoric isolated finds are non-structural remains consisting of four or fewer artifacts. Historic isolated finds are individual historic artifacts or small clusters of artifacts that do not represent an established refuse dump.

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29. Describe Survey Method: Field inventory was accomplished to 100% surface inventory standards (class III) by walking 20-meter transects over the entire survey area (identified on the attached map as the project area). Transects started in the southeast corner of the property and ran north and south moving from east to west. SAIC paid special attention to areas where surface visibility or subsurface exposure was enhanced, such as animal burrows and two-track roads.
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### VIII. RESULTS

30. List IFs if applicable. Indicate IF locations on the map completed for Part III.  
No prehistoric or historic resources or isolated finds were identified during the survey. The area is highly disturbed from two track roads, construction of gas wells, grazing and bulldozing used to contain a fire on adjacent land.
31. Using your professional knowledge of the region, why are there none or very limited cultural remains in the project area? Is there subsurface potential? The area is highly disturbed. Past ground disturbing activities include development of natural gas wells, grazing, two-track roads, and bulldozing used to contain a fire on adjacent land. These activities have reduced the likelihood of finding intact cultural resources. In some cases (bulldozing), the potential remains have been removed from the site. While no sites or isolates were identified on the surface, there is potential for buried deposits. If during construction archaeological remains are uncovered, construction should stop and a qualified archaeologist brought in to determine the significance of the material.



PROPOSED  
SPRAY IRRIGATION AREA

PROPOSED  
WASTEWATER  
STORAGE LAGOON

SURVEY BOUNDARY

PLANT SITE

**Changing World Technologies' Thermal Conversion  
Process Commercial Demonstration Plant,  
Weld County, Colorado**

Milton Reservoir 7.5 Quad

1950

Photo revised 1971



T65W R3N Section 32

**COLORADO HISTORICAL SOCIETY**

**Office of Archaeology and Historic Preservation  
1300 Broadway  
Denver, CO 80203**

January 12, 2004

Joyce Beck  
NEPA Document Manager  
DOE Golden Field Office  
1617 Cole Boulevard  
Golden, CO 80401-3393

Re: File Search - Thermal Conversion Process Commercial Demonstration Plant  
Weld County, Sec. 32, T3N, R65W

At your request, our office has conducted a search of the Colorado Inventory of Cultural Resources for this project area.

There are NO identified sites located in the project area and NO surveys have been undertaken in the project area.

Our files contain incomplete information for this area, as most of Colorado has not yet been inventoried for cultural resources. There is the possibility that as yet unidentified cultural resources exist within the project area.

Therefore, in the event there is Federal or State involvement, we recommend that a professional survey be conducted to identify any cultural resources in the project area which are eligible to be listed on the National Register of Historic Places. We look forward to consulting with you regarding the effect of the proposed project on any eligible cultural resource in accordance with the Advisory Council on Historic Preservation Procedures for the Preservation and Protection of Historic and Cultural Resources (36 CFR 800). Please provide this office with the results of the cultural resource survey for our review of professional adequacy and compliance with regulations.

If you have any questions, please contact Jim Green with the Office of Archaeology and Historic Preservation at (303) 866-4674.

Thank you for your interest in Colorado's cultural heritage.

Susan M. Collins  
Deputy State Historic Preservation Officer for Archaeology

\*Information regarding significant archaeological resources is excluded from the Freedom of Information Act. Therefore, legal locations of these resources must not be included in documents for public distribution.



**COLORADO  
HISTORICAL  
SOCIETY**

**SEP 17 RECD**

**The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137**

September 14, 2004

Steven P. Black  
NEPA Compliance Officer  
Department of Energy  
1617 Cole Boulevard  
Golden, CO 80401-3305

Re: Changing World Technologies' Thermal Conversion Process Commercial  
Demonstration Plant in Weld County (DOE/EA 1506)

Dear Mr. Black:

This is to acknowledge receipt of your September 7, 2004 correspondence and the cultural resource report prepared for the project listed above.

Since no historic properties were identified during an adequate cultural resource survey of the area of potential effect, we will concur with the determination that no historic properties will be affected.

Should unidentified archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4) in consultation with our office.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Jim Green at 303-866-4674.

Sincerely,

Georgianna Contiguglia  
State Historic Preservation Officer

GC/WJG